

Application No.: 09/712,768
Amendment Dated: June 29, 2004
Reply to Office Action mailed: January 30, 2004

AMENDMENTS TO THE CLAIMS

LISTING OF CLAIMS:

Claims 1-21. (Withdrawn).

Claim 22. (Previously amended) A recombinant DNA comprising the polynucleotide sequence of SEQ ID NO: 1.

Claim 23. (Previously amended) A recombinant DNA comprising a polynucleotide sequence that encodes the amino acid sequence of SEQ ID NO: 2.

Claims 24-26. (Cancelled).

Claim 27. (Previously cancelled).

Claims 28-29. (Cancelled).

Claim 30. (Previously cancelled).

Claim 31. (Currently amended) An expression vector comprising a recombinant DNA according to any one of claims 22, 23 and 57 ~~22-26, 28 and 29~~, wherein the expression vector is suitable for expression in an organism.

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Claim 32. (Previously cancelled).

Claim 33. (Currently amended) An expression vector according to claim 31, wherein the expression vector is a bacterial expression vector ~~organism is a microorganism~~.

Claims 34-37. (Cancelled).

Claim 38. (Currently amended) A host cell ~~recombinant microorganism~~ comprising the expression vector of claim 31.

Claim 39. (Cancelled).

Claim 40. (Currently amended) A host cell ~~recombinant microorganism~~ comprising at least one recombinant DNA according to any one of claims 22, 23 and 57 ~~22-26, 28 and 29~~.

Claim 41. (Previously cancelled).

Claim 42. (Currently amended) A host cell ~~recombinant microorganism~~ according to claim 40, wherein the host cell ~~microorganism~~ is a bacterium ~~bacteria~~.

Claim 43. (Currently amended) A host cell ~~recombinant microorganism~~ according to claim 40, which ~~42, wherein the microorganism~~ is selected from the group consisting of

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Escherichia coli, *Pseudomonas putida*, *Acetobacter xylinum*, *Acetobacter pasteurianus*,
Acetobacter aceti, *Acetobacter hansenii*, and *Gluconobacter oxydans*.

Claim 44. (Currently amended) A host cell ~~recombinant microorganism~~ according to claim 40, wherein the host cell ~~is microorganism~~ ~~is obtained from~~ *Gluconobacter oxydans* DSM 4025.

Claim 45. (Cancelled).

Claim 46. (Currently amended) A process for producing a cytochrome c oxidase complex comprising:

- (a) cultivating in a culture medium a host cell ~~recombinant microorganism~~ according to claim 40; and
- (b) recovering a cytochrome c oxidase complex from the culture.

Claim 47. (Currently amended) A process according to claim 46, wherein the host cell ~~recombinant microorganism~~ is a bacterium ~~bacteria~~.

Claim 48. (Currently amended) A process according to claim 46, wherein the host cell ~~microorganism~~ is selected from the group consisting of *Escherichia coli*, *Pseudomonas putida*, *Acetobacter xylinum*, *Acetobacter pasteurianus*, *Acetobacter aceti*, *Acetobacter hansenii*, and *Gluconobacter oxydans*.

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Claim 49. (Currently amended) A process according to claim 46, wherein the host cell ~~is microorganism is obtained from~~ *Gluconobacter oxydans* DSM 4025.

Claim 50. (Cancelled).

Claims 51-56. (Withdrawn).

Claim 57. (Currently amended) A recombinant DNA comprising a polynucleotide sequence that hybridizes to a ~~the~~ complementary strand of SEQ ID NO: 1 under high stringency conditions comprising overnight incubation in 6X SSC, 0.5% SDS, 100 ug/ml denatured salmon sperm DNA, 50% formamide, at 42°C; followed by a first wash in 2X SSC, 0.5% SDS at room temperature for 15 minutes; followed by a second wash in 0.1X SSC, 0.5% SDS at room temperature for 15 minutes, wherein the recombinant DNA encodes a polypeptide that forms a complex having cytochrome *c* oxidase activity with a *Gluconobacter oxydans* DSM 4025 cytochrome *c* oxidase core subunit II.

Claims 58-59. (Previously cancelled).

Claim 60. (Cancelled).

Claim 61. (Currently amended) A recombinant DNA according to claim 57, wherein the complex comprises at least a core subunit I (COI) and a core subunit II (COII), wherein the apparent molecular masses of COI and COII are about 43 ± 10 kDa and 36 ± 10

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kDa, respectively as determined by SDS-PAGE and the complex has displays an absorption spectrum with a ~~showing an aa3-type cytochrome c oxidase~~ peak at 605 ± 1 nm in a reduced minus oxidized difference spectrum.

Claim 62. (Cancelled).

Claim 63. (Currently amended) A recombinant DNA according to claim 57 24, wherein core subunit II comprises SEQ ID NO: 4.

Claims 64-72. (Cancelled).

Claim 73. (Currently amended) An expression vector comprising a ~~at least one~~ recombinant DNA according to claim 61 ~~any one of claims 61, 65 and 69.~~

Claims 74-75. (Cancelled).

Claim 76. (Currently amended) A host cell ~~recombinant microorganism~~ comprising a ~~at least one~~ recombinant DNA according to claim 61 ~~any one of claims 61, 65 and 69.~~

Claims 77-80. (Cancelled).

Claim 81. (New) A host cell comprising the expression vector of claim 73.